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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,536	08/21/2008	Jill MacDonald Boyce	PU040098	9962

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EXAMINER	
PHILIPPE, GIMS S	

ART UNIT	PAPER NUMBER
2485	

NOTIFICATION DATE	DELIVERY MODE
12/16/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/593,536	BOYCE ET AL.	
	Examiner	Art Unit	
	GIMS PHILIPPE	2485	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-15* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-4,8-11 and 15* is/are rejected.

8)☒ Claim(s) *5-7 and 12-14* is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/19/06, 5/14/09,10/08/09, 7/11/11, 08/30/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is a first office action in response to application no. 10/593,536 filed on August 21, 2008 in which claims 1-15 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.
>
> ... a signal does not fall within one of the four statutory classes of Sec. 101.
>
> ... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

3. Claim 15 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows.

Claim 15 defines **signal data structure** embodying functional descriptive material. However, the claim does not define a method wherein a video signal is utilized to perform the coding of the low resolution prediction residual and is thus non-statutory for that reason.

The examiner suggests amending the claim to cancel the signal data structure wherein the compression method can be properly claimed. Such amendment will make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10, 12-18 and 21 of U.S. Patent Application 11/663,318 to Boyce et al.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the present patent application are somewhat similar to the limitations of the cited Patent Application Publication no.

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Boyce's scalable decoder by incorporating its teachings in the present Patent Application publication to provide the best method to code low downsampled prediction residual as taught by Boyce (See paragraph [0022]).

6. Claims 1-15 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-10 and 14-21 of U.S. Patent Application 11/665,302 to Yin et al.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the present patent application are somewhat similar to the limitations of the cited Patent Application Publication no.

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Boyce's scalable decoder by incorporating its teachings in the present Patent Application publication to provide the best method to code low down-sampled prediction residual as taught by Boyce (See paragraph [0024]).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1, 2, 8, 9 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Sarkijarvi et al. (US Patent Application Publication no. 2005/0175099).

Regarding claims 1, 2, 8-9 and 15, Sarkijarvi discloses a scalable video encoder and encoding method comprising the steps of forming a motion compensated full resolution prediction (See paragraph [0042], lines 10-26), combining the motion compensated full resolution prediction from an image block to form a prediction residual (See paragraph [0043-0044]), downsampling the prediction residual to form a low resolution residual,

and coding the low resolution down-sampled prediction residual (See paragraph [0020]).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3-4 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkijarvi et al. (US Patent Application Publication no. 2005/0175099) in view of the Applicant Admitted prior Art.

As per claims 3-4 and 10-11, most of the limitations of these claims have been noted in the above rejection of claims 2 and 9.

It is noted that Sarkijarvi does not particularly disclose the inverse quantizer, upsampler, adder and entropy coder as detailed in the claims.

However, Applicant admits that such arrangement as claimed in claims 3-4 and 10-11 are considered Prior Art (See Applicant's admitted prior art Fig. 6) where an inverse quantizer 650 is in signal communication with transformer/quantizer 620, an upsampler 655 is in signal communication with the inverse quantizer 650, and a video encoder further comprises an entropy encoder 640.

Therefore, it is considered obvious that one skilled in the art at the time of the invention having Sarkijarvi and the Applicant's admitted prior art before him/her, would have no difficulty to modify the scalable video encoder and encoding method of Sarkijarvi to provide the arrangement as taught by Applicant's admitted prior art. The motivation for performing such a modification in Sarkijarvi is to be able to use a Reduced Resolution Update mode thereby improving the coding efficiency at low bitrates by reducing the number of residual macroblocks (See Applicant's admitted prior art paragraph [0017]).

11. Claims 5-7 and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ng (US Patent no. 5262854) teaches lower resolution HDTV receivers.
Vetro et al. (US Patent no. 7170932) teaches video transcoder with spatial resolution reduction and drift compensation.
Fimoff et al. (US Patent no. 6504872) teaches down-conversion decoder for interlaced video.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIMS PHILIPPE whose telephone number is (571)272-7336. The examiner can normally be reached on M-F (10:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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